

REMARKS

Claim 18 has been amended grammatically to clarify that which Applicant regards as the invention. Support for the amendment can be found in Claim 18 as originally filed. No new matter has been added.

Rejection of Claims 18-24 and 27 Under 35 U.S.C. §112, First Paragraph

Claims 18-24 and 27 have been rejected under 35 U.S.C. §112, first paragraph. The attached Declaration under 37 C.F.R. 1.132 by Dr. Ekambar R. Kandimalla, and the Exhibits enclosed therewith, provide support for further immunomodulatory moieties recited in the Claim 18. Reconsideration and withdrawal of the rejection are respectfully requested.

Rejection of Claims 18-24 and 27 Under 35 U.S.C. §112, Second Paragraph

Claims 18-24 and 27 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant will address the rejections in the order provided by the Examiner.

According to the Examiner, the structure of Claim 18 is confusing and an alternate wording of the claim has been suggested. Applicant has amended Claim 18 as suggested by the Examiner.

Additionally, the Office Action has rejected Claim 18 because the claim is drawn to a 1,3-propanediol linker which may be “substituted”. Applicant respectfully disagrees. At page 14, line 23, through page 15, line 27, for example, the specification defines the term “substituted” and provides examples of suitable substituents. Applicants submit, therefore, that the term “substituted”, is defined by the specification and, when read in light of the specification, has definite meaning to one of ordinary skill in the art.

Claim 18 is also rejected as indefinite because the claim limits the modified base to optionally “P-base”. Applicant submits a declaration by Dr. Ekambar Kandimalla, along with Lin *et al.*, Synthesis of oligodeoxyribonucleotides containing degenerate bases and their use as primers in the polymerase chain reaction, Nucleic Acids Research, 20(19): 5149-5152 (1992), which shows the structure for 6H,8H-3,4-dihydropyrimido[4,5-c][1,2]oxazin-7-one (P-base) (see

abstract and Figure 1). Thus, the structure for P-base was known by those skilled in the art at the time the application was filed. Reconsideration and withdrawal of the rejection are respectfully requested.

Claim 23 is rejected as indefinite because it is unclear if the step of administering the adjuvant is an additional step that is to be administered separately, or if the adjuvant is intended to be administered with the CpG/immunomodulatory/vaccine. Applicant previous argued that the claim is definite when read in view of the definition of “in combination with” found on page 12 of the instant specification.

Applicant does not believe that the use of the specification to define the phrase “in combination with”, as found in Claim 23, reads unrecited limitations into the claim. It has been consistently held that reading a claim in light of the specification, to thereby interpret limitations explicitly recited in the claim, is a quite different thing from reading limitations of the specification into a claim, to thereby narrow the scope of the claim (See MPEP 2111). Use of the definition found on page 12 of the specification does not read limitations of the specification into the claim. Rather, the definition in the specification just recites what one of skill in the art would understand the phrase “in combination with”, as used in Claim 23, to mean.

Reconsideration and Withdrawal of the rejection are respectfully requested.

Rejection of Claims 18-24 and 27 Under 35 U.S.C. §103(a)

Claims 18-24 and 27 are rejected under 35 U.S.C. §103(a) as being unpatentable over the combination of Hutcherson *et al.*, McCluskie *et al.*, and Kuramoto *et al.*. Applicant respectfully disagrees.

Applicant acknowledges that the previous 103(a) rejection over Hutcherson *et al.* alone has been overcome and withdrawn by the Examiner. McCluskie *et al.* and Kuramoto *et al.* do not provide that which Hutcherson *et al.* lacks.

McCluskie *et al.* describe the use of a CpG oligonucleotide as a vaccine adjuvant for intranasal delivery of hepatitis B surface Ag. However, McCluskie *et al.* do not teach or suggest administering a compound comprising a CpG dinucleotide and an immunomodulatory moiety.

Kuramoto *et al.* provide nothing of relevance to the instant invention. Kuramoto *et al.* describe the immunostimulatory activity of a few oligonucleotides having a palindromic

sequence, the most potent of which happen to have a 5'-CG-3' motif. Kuramoto *et al.* stress the importance of the 6-mer palindromic sequence, and describe the loss of activity by the oligonucleotides after an exchange or a deletion of bases within, but not outside, the 6-mer palindromic sequence; a concern not shared by the Applicant (see page 1128, col. 1, lines 16-19). Additionally, the fact that the “most potent” of the Kuramoto *et al.* oligonucleotides have a 5'-CG-3' motif is of no importance because Kuramoto *et al.* cannot explain why more palindromes having the 5'-CG-3' motif are inactive as compared to those with the 5'-CG-3' motif (See Table 1 and page 1129, col.2 lines 33-36). Furthermore, Kuramoto *et al.* fail to teach or suggest the use of CpG dinucleotides; that the internucleotide linkages could be modified; or that such a modification would increase the immunostimulatory property of the dinucleotide. Thus, one of skill in the art would not look to Kuramoto *et al.* for any guidance with respect to the CpG containing oligonucleotides of the instant invention.

As the combination of Hutcherson *et al.*, McCluskie *et al.*, and Kuramoto *et al.* fail to teach or suggest the claimed invention, Applicant respectfully request reconsideration and withdrawal of the rejection.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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